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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,529	08/17/2001	Christopher Gregory Malone	10007433-1	4289

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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EXAMINER

DINH, TUAN T

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 03/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/932,529

Applicant(s)

MALONE ET AL.

Examiner

Tuan T Dinh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- KC
3/24/02 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-12, 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-16, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's election with traverse Group III, claims 13-16, and 19-20 in Paper 4 is acknowledged. The traverse is on the ground(s) that the searches for Group I, and II would be co-extensive. This is not found persuasive because the method claims 1-12 would be classified in a different class than claims 13-16, and 19-20.

Claims 5-6, 12, and 17-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected embodiments I and II, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 3.

The requirement is still deemed proper. Claims 1-12, and 17-18 are withdrawn from further consideration as being drawn to non-selected subject matter.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-4, and 7, drawn to a method to assemble a daughter card support to a motherboard substrate, classified in class 29, subclass 832.
 - II. Claims 8-11, drawn to a method to fabricate a daughter card support, classified in class 29, subclass 842.
 - III. Claims 13-16 and 19-20, drawn to an assembled substrate, classified in class 361, subclass 810.
3. The inventions are distinct, each from the other because of the following reasons:

Inventions (I and II) and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the method to assemble and fabricate a daughter card support to the motherboard can be used a spring clip or post instead of the daughter card support.

Inventions II and I are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention II has separate utility such as a method to fabricate a daughter card support and invention I has separate utility such as a method to assemble a daughter card support. See MPEP § 806.05(d).

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Mr. Kevin Roe (Reg. 40,148) on March 12, 2002 a provisional election was made with traverse to prosecute the invention of III, claims 13-16, and 19-20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-12, and 17-18 withdrawn from further

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consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

8. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **"one or more electrical connections, claim 15, line 2, and plurality of air flow channels and holes, claim 20"** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Applicant is selected Embodiment I-figure 2 to exam in this application; therefore, all details as claimed should shows in figure 2.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claim 20 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification is silent regarding "one or more electrical connections, claim 15, line 2, and each air flow channel includes one or more holes, claim 20, lines 2-3".

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 13-15 and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheng et al. (U. S. Patent 5,901,038).

As to claim 13, Cheng discloses an assembled substrate as shown in figures 1-16 comprising:

a motherboard substrate (125, column 3, lines 66-67) including one or more electrical components (136, column 4, lines 27-28);

a daughter-card substrate (140), wherein said daughter-card substrate (104) includes an electrical component; and

a daughter-card support (105, column 3, lines 63-64) to structurally support said daughter-card substrate in fixed orientations relative to said motherboard substrate.

As to claim 14, Cheng discloses an assembled substrate as shown in figures 1-16 wherein said motherboard substrate and said daughter-card substrates capable of being a printed circuit board (PCB).

As best understood to claim 15, Cheng discloses an assembled substrate as shown in figures 1-16 wherein said daughter-card support (105) further comprises one or more electrical connections (120, column 4, line 29) to a daughter-card (140).

As to claim 19, Cheng discloses an assembled substrate as shown in figures 3-6 wherein said daughter-card support allows hand replacement of said daughter-card substrate.

As best understood to claim 20, Cheng discloses an assembled substrate as shown in figures 1-16 wherein said daughter-card support (105) has a plurality of air-flow channels (115, column 3, line 66), wherein each air-flow channel includes one or more holes.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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14. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al (U. S. Patent 5,901,038).

As to claim 16, Cheng discloses all of the limitations of the claimed invention, except for said daughter-card support being fabricated from a material made from plastic.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the plastic supported to the daughter card as taught by Cheng in order to protect an ESD from the daughter card and make low cost for manufacture.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Moore et al., Chhatwal, Hastings et al., Lint et al., and Willis disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-1341 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD

March 20, 2002.



K. L. Kline
Primary Examiner